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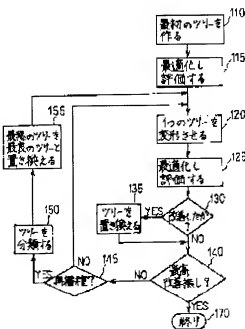
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(54) METHOD AND DEVICE FOR GENERATING CONSTRUCTIVE SOLID GEOMETRY DISPLAY OF PLURAL BODIES

(57)Abstract:

PROBLEM TO BE SOLVED: To easily and automatically convert a voxel display of a surface or body to a CSG(constructive solid geometry) display of a body by optimizing a new CSG tree as to respective bodies and replacing one CSG tree with the new CSG tree.

SOLUTION: Data regarding a body are stored in a memory 30 and compared with the CSG structure that the system generates. A central processor 20 executes a specific process with the relation with the stored body data. In this case, a starting group is generated and then respective trees are optimized and evaluated; and a tree which is selected at random is deformed at random, locally optimized, and evaluated. When the deformed tree is better than the existing tree, the deformed tree replaces the original tree. For reseeding, the trees are classified by their scores and a half of a tree which has a wrong score is replaced with a tree which has a good score.



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